

[0006] The steering column assembly can be rake and/or reach adjustable.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] For a better understanding of the invention and to show how the same may be carried into effect, reference will now be made, by way of example, to the accompanying drawings, in which:-

Fig. 1 is a diagrammatic plan view of part of a steering column assembly for a vehicle;

Fig. 2 is a side view of the assembly shown in Fig. 1;

Fig. 3 is a longitudinal sectional view of part of the assembly shown in Figs. 1 and 2;

Fig. 4 is an exploded perspective view of part of the assembly shown in Figs. 1 to 3; and

Fig. 5 is a perspective assembled view of that part of the assembly shown in Fig. 4.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0008] Referring to the drawings, the steering column assembly includes an intermediate steering column drive shaft 1 for connection at its lower end to a universal joint 2 with a lower steering column drive shaft (not shown), the intermediate drive shaft 1 being coupled

[0009] The central drive shaft 4 is rake and/or reach adjustable by means of an adjustment assembly 6 including a clamping mechanism.

[0011] The central steering column 4 is also arranged to be collapsible in the event of vehicle crash and is mounted in two rotary bearings 10A and 10B (Fig. 3) each connecting the central steering column 4 to the upper and lower mounting members 7 of the mounting bracket 5.

[0013] The present steering column assembly includes a slidable center bearing construction in the upper steering column assembly which comprises a cylindrical tube 11 of plastics material such as a thermo-molded

plastics acetal material which is flexibly attached to a lateral mounting bracket 12 at a lower end of the mounting bracket 5 and is axially located in, and slidably through, a bore 13 of the lock housing assembly 9 at the upper end of the mounting bracket 5. The tube 11 may alternatively be made from a glass or carbon-fibre-filled plastics acetal medium in order to obtain an enhanced bending stiffness from increase in the modular elasticity leading to a higher natural frequency of vibration for the steering column. Since the tube 11 is of plastics material, it can be precision molded so as to allow the component readily to make an operational slide fit within the bore 13 (which is machined) of the housing of the lock assembly 9.

[0014] Furthermore, the material of the plastics tube 11 allows for a natural lubrication effect leading to a relatively low co-efficient of surface friction which assists in the provision of a low static breakaway and column ride-down force in the event of vehicle crash. It also accordingly has a low density when compared with conventional metallic materials, which provides weight reduction benefit.

[0015] A bush liner 14 is provided to fit about the lower end of the plastics tube 11, the liner upon assembly fitting within the lateral mounting bracket 12 of the mounting bracket 5.